

WASHINGTON DEPARTMENT OF ECOLOGY
MAIL STOP 47600
OLYMPIA, WASHINGTON 98504

IN THE MATTER OF AIR EMISSIONS FROM:

WestRock CP, LLC
801 Portland Avenue
Tacoma, WA 98421

NOC ORDER No. DE 99AQIS-94,
Modification 1

DESCRIPTION

WestRock CP, LLC (WestRock), previously Simpson Tacoma Kraft Company, operates an integrated pulp and paper mill on approximately 60 acres adjacent to the mouth of the Puyallup River on Commencement Bay in Tacoma, Washington. The mill uses the Kraft process to produce market pulp and paper for linerboard, bags, sacks, and similar food and industrial grade packaging. WestRock operates under Air Operating Permit (AOP) No. 0000850.

Notice of Construction (NOC) Approval Order No. DE 99AQIS-94 was issued on January 24, 2000 in accordance with RCW 70.94.152, WAC 173-400-110, and WAC 173-460-040. NOC Order No. DE 99AQIS-94 approved modifications to Recovery Furnace No.4. Modifications included the replacement of an indirect liquor heater and the installation of a third level of combustion feed air (tertiary air).

On September 30, 2020, WestRock submitted a modification request for revisions to NOC No. DE 99AQIS-94 in accordance with WAC 173-400-111(8). Ecology made the following changes:

1. The required particulate stack testing frequency at Recovery Furnace No.4, originally required at minimum quarterly, has been revised to be required at minimum annually. Additional specifications for the test have been added, including required testing time, volume, and clean-up solution.
2. The incorporation of changes made to Order No. DE 99AQIS-94 made by reference in Order No. 1916-AQ05.

FINDINGS AND DESCRIPTION OF CHANGES

Pursuant to New Source Review (NSR) regulations in the Washington Administrative Code (WAC) 173-400-110 and 173-400-111 and based upon the complete NOC Application, Ecology finds the following:

1. NOC Application Processing Timeline. WestRock submitted an NOC Application to Ecology which was received via mail on September 30, 2020. The application requested the modification of NOC Order No. DE 99AQIS-94. Ecology reviewed the initial

application and found it incomplete per WAC 173-400-111 on October 27, 2020. A final amended application was postmarked on November 12, 2020 and received by Ecology. The application was determined to be complete on December 10, 2020.

2. Administrative Modification. The modification request is administrative in nature. No additional physical changes to emissions units or operations are proposed in the modification request. This order modification does not approve the emission of additional pollutants.
3. Modifications requested by WestRock.
 - a. Reduction in stack testing frequency. The original issuance of Order No. DE 99AQIS-94 required a minimum of quarterly stack testing to demonstrate compliance with the particulate limit of 0.044 gr/dscf at Recovery Furnace No.4. WestRock has requested this be reduced to an annual source testing frequency. Ecology has made this change, adding language to indicate that it is the minimum source test frequency. Ecology may implement more frequent stack testing in the AOP through gap filling. WestRock submitted the information in Table 1 with their NOC modification application. Table 1 below shows that WestRock has operated well below the established limit from 2016 through 2020.

Table 1. Historical PM Testing Data for Recovery Furnace No.4

Test Date	Test Result (gr/dscf)	Percent of Limit (0.044 gr/dscf)
03/23/2016	0.014	31%
06/14/2016	0.009	21%
09/13/2016	0.012	26%
11/21/2016	0.013	29%
03/23/2017	0.005	11%
04/13/2017	0.013	29%
09/21/2017	0.007	17%
12/13/2017	0.002	5%
03/8/2018	0.008	19%
05/1/2018	0.010	22%
07/12/2018	0.010	24%
10/8/2018	0.005	11%
03/27/2019	0.004	8%
06/11/2019	0.011	24%
08/14/2019	0.005	12%
11/21/2019	0.012	27%
03/6/2020	0.004	8%

Test Date	Test Result (gr/dscf)	Percent of Limit (0.044 gr/dscf)
06/23/2020	0.003	7%

- b. The incorporation of Order No. 1916-AQ05. Order No. 1916-AQ05, issued on July 26, 2005, modified Order No. DE 99AQIS-94 by reference. These changes have been incorporated into this issuance of Order No. DE 99AQIS-94.
- i. Condition No.1 of Order No.1916-AQ05 states that the NO_x limit of 475 tons/year that was in the 2000 issuance of Order No. DE 99-AQIS94 was superseded by the annual limit specified in NOC Order DE 01AQIS-3114. The limit and the corresponding emission calculation has been removed from this issuance of Order No. DE 99-AQIS94.
 - ii. Condition No.3 of Order No. 1916-AQ05 modified the annual oil capacity calculation included in this Order. This change has been incorporated into this amendment of Order No. DE 99AQIS-94. WestRock must comply with the annual oil capacity limit to avoid being subject to the NO_x limit in 40 CFR Part 60, Subpart Db, “Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units”. 40 CFR 63.44b(c) states that the numerical emission limits for NO_x do not apply to an affected facility that is subject to and in compliance with a federally enforceable requirement that limits operation of the facility to an annual capacity factor of 10% or less for coal, oil, or natural gas. The capacity factor in this permit acts as that federally enforceable requirement.
 - iii. Condition No.4 of Order No. 1916-AQ05 rescinded Condition B.3a of Order No. DE 99AQIS-94. This change has been incorporated into this amendment of Order No. DE 99AQIS-94. Condition B.3a required WestRock to use a Continuous Opacity Monitoring System (COMS) as an indication of continuous compliance for the particulate limit for 40 CFR Part 60, Subpart BB to which Recovery Furnace No.4 was newly subject to. Order No. 1916-AQ05 stated that the Condition B.3a has been superseded by monitoring requirements in 40 CFR Part 60, Subpart BB. The monitoring requirements for 40 CFR Part 60, Subpart BB are managed in WestRock’s AOP and would be redundant if included in this amendment of the NOC.
4. Additional Changes made by Ecology. Ecology found it necessary to make the following modifications in this amendment of Order No. DE 99AQIS-94.
- a. Change in underlying authority for opacity limit when firing or co-firing oil. The opacity limit for Recovery Furnace No.4 which is retained in this order was

originally identified as having 40 CFR Part 60, Subpart Db Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units as the underlying authority. The underlying authority has been changed to this Order, No.99AQIS-94. Recovery Furnace No.4 is not subject to the Subpart Db opacity (PM surrogate) standard. 40 CFR 60.40b(l) states that affected facilities that meet the applicability of both Subparts Db and BB are subject to the SO₂ and NO_x standards under subpart Db and the PM standards under Subpart BB. Therefore, because Recovery Furnace No.4 meets the applicability for both Subpart BB and Db, Recovery Furnace No.4 is only subject to Subpart BB PM standards. Although WestRock is not subject to Subpart Db, they are still subject to the limit because it was incorporated into the original NOC.

- b. Changes in testing requirements. The previous issuance of this Order allowed for a particulate matter source test at Recovery Boiler No.4 to consist of one 1-hour run in lieu of three one-hour runs. This allowance has been rescinded. A test must consist of three runs. Minimum timing, sample collection volume, and cleanup solvent requirements have been added to this condition in accordance with 40 CFR Part 60, Subpart BB.
5. State Environmental Protection Act (SEPA). The project complies with applicable SEPA requirements. A determination of nonsignificance (DNS) was issued for the project on December 21, 1999. A 30 day public comment period was held. The comment period ended on January 24, 2000. As the amendments to the Order do not change the scope of the previously approved project and do not allow for an increase in emissions to the atmosphere, Ecology adopted the existing DNS on **date**. The adoption of the DNS was made available for public comment at the same time as the order.
6. Additional Minor Changes. The following additional changes were made:
 - The previous order was written for Simpson Tacoma Kraft Company, LLC. The Order has been updated to reflect that the current Permittee is WestRock CP, LLC.
 - Condition No.2 of the previous issuance of this order stated that the approval shall become void if construction of the project is not commenced within eighteen (18) months after receipt of the final approval, or if construction or operation of the facility is discontinued for a period of eighteen (18) months. WestRock commenced construction of the project within eighteen months and fulfilled the requirements of the condition. The condition has been removed from this issuance of Order No. DE 99AQIS-94.
 - Language from 40 CFR 60.46b(a) which specifies that the 20% opacity limit does not apply during periods of startup, shutdown, or malfunction has been added.

- Language for 35% opacity limit has been updated to better reflect the language used in 40 CFR Part 60, Subpart BB.
- Additional minor changes have been made to make this document meet accessibility requirements under the Americans with Disabilities Act.

HISTORICAL FINDINGS

The following background information was included in the previous issuance of Order No. DE 99AQIS-94, issued January 24, 2000.

Simpson Tacoma Kraft Company (Simpson) submitted a NOC Application dated November 23, 1999, which proposed modifications to Recovery Furnace No.4. This NOC approval addresses replacement of a direct contact black liquor heater with an indirect liquor heater and installation of a third level of combustion air feed (tertiary air). The indirect liquor heater improves furnace productivity by allowing a greater firing rate of black liquor. It also improves operating safety by reducing the amount of water introduced into the furnace with the liquor. The tertiary air improves furnace air distribution and reduces the furnace's air emissions of CO, VOC, SO₂, and TRS compounds by increasing combustion efficiency. These improvements result in greater production potential for the mill and a corresponding potential increase in conventional pollutants for NO_x, TRS, VOCs, PM₁₀, and PM emissions from the mill's pulping units. Only potential NO_x, PM, and PM₁₀ emission increases are great enough to trigger review of PSD applicability. Sufficient contemporaneous decreases in actual emissions exist so that net emissions increases of NO_x, PM, and PM₁₀ from the change will all be below PSD threshold levels. These reductions are reflected in emission reduction credits (ERC) granted for the shutdown of Recovery Furnace No.3 and Smelt Vent No.3 in Order DE 99-AQI002. The net emission changes resulting from this project are presented in Table 1 of this Order.

In accordance with WAC 173-400-171, a 30-day public comment period will have occurred prior to final issuance of this NOC approval. A determination of nonsignificance has been issued concurrently with this approval in conformance with the State Environmental Policy Act rules (Chapter 197-11 WAC).

The Department of Ecology, State of Washington, pursuant to RCW 70.94.152 makes the following determinations:

1. The proposed project, if constructed and operated as herein required, will comply with all applicable new source performance standards, national emission standards for hazardous air pollutants, and emission standards adopted under Chapter 70.94 RCW.
2. The proposed project, if constructed and operated as herein required, will provide all known, available and reasonable methods of emission control.

3. Emissions from the proposed project, if constructed and operated as herein required, will not cause or contribute to a violation of any ambient air quality standard.
4. As construed for this project, Best Available Control technology (BACT) as required under WAC 173-400-113 and Toxic Best Available Control Technology (T-BACT) as required under WAC 173-460-060 will be used for control of emissions.
5. Following the 30-day public comment period, EPA will have an additional 45-day review period per WAC 173-401-720(1)(e). This overall public comment and EPA review process is intended to meet the “substantially equivalent” criteria required by WAC 173-401-720(1)(e) to allow the applicable requirements of this NOC Approval to be incorporated into Simpson’s Title V Air Operating Permit as administrative changes.
6. Changes in emissions are presented in Table 1 below:

Table 2. Changes in air emissions in tons/year resulting from the proposed changes to Recovery Furnace No.4. (See Note 1)

Pollutant change area	CO	NO _x	SO ₂	TRS	VOC	PM ₁₀	PM
Mill-wide Changes	-44	86	-41	5	36	17	21
Recovery Furnace No.4	-56	78	-49	-1	-1	5	6
PSD Threshold (Mill-wide)	100	40	40	10	40	15	25
ERCs Applied (Mill-wide)	0	50	0	0	0	17	21
Net Change (Mill-wide)	-44	36	-41	5	36	0	0

Note 1. Emission estimates based on the following variables: Baseline average pulp production of 895 air-dried unbleached ton (ADUT) per day at 2.87 million lb black liquor solids (BLS) per day fed to Recovery Furnace No.4 (10/31/97 to 10/31/99 actual). Potential average pulp production of 1063 ADUT/day and 3.41 million lb BLS/day feed to Recovery Furnace No.4. Average Recovery Furnace No.4 stack gas volume of 87.5 DSCF (at 68 °F) per lb BLS fired at 8% O₂.

7. The potential NO_x mass emission rate from Recovery Furnace No.4 after the proposed modifications was projected to be 475 tons/year based on an annual emissions NO_x concentration of 75 ppm. The 475 tons/year annual NO_x mass emission limit imposed by this Order makes this assumption, which was used for the PSD applicability review netting analysis, enforceable.

CONDITIONS

1. Any activity undertaken by WestRock or others, in a manner which is inconsistent with the application and this determination, shall be subject to the Department enforcement under applicable regulations. Nothing in this determination shall be construed so as to relieve WestRock of its obligations under any state, local, or federal laws or regulations.
2. WestRock is prohibited from operating Recovery Furnace No.3 and Smelt Vent No. 3, the source of the contemporaneous emissions decreases that allow this project to net out of PSD applicability. Those emissions decreases are made federally enforceable by this prohibition. As these decreases are reflected in ERCs, implementation of this Order means that WestRock will have consumed 50 tons per year of NOx ERCs, 21 tons of PM (designated as TSP in the ERC certificate) ERCs, and 17 tons per year of PM10 ERCs, granted in Order DE 99-AQI002.
3. WestRock shall comply with the applicable requirements below.

Table 3. Applicable Requirements for Recovery Furnace No.4

Parameter	Limit (shall not exceed)	Monitoring & Reporting	Applicable Requirements (basis of authority)
Particulate	0.044 gr/dscf @ 8% O ₂	EPA Method 5 is the reference test method, except water shall be used as the cleanup solvent instead of acetone in the sample recovery procedure. The test will consist of at least three runs. Each run shall be at least 60 minutes and 31.8 dscf. The particulate concentration shall be corrected to the appropriate oxygen concentration according to 40 CFR 60.284(c)(3). Sample at least once per calendar year.	40 CFR 60.282(a)(1)(i) for the particulate limit 40 CFR 60.285(b)(1) for testing requirements
NOx	85 ppm @ 8 % O ₂ , 30-day rolling avg	EPA Methods 7, 7A, 7B, or 7E are the reference test methods. Monitor ongoing compliance continuously using a CEM conforming to 40 CFR Pt. 60 App. F and App. B, Perf. Spec. 2. Report 30-day rolling averages for each operating day of the month and excess emissions monthly.	Order NO. DE 99AQIS-94 (BACT limit)

Parameter	Limit (shall not exceed)	Monitoring & Reporting	Applicable Requirements (basis of authority)
oil heat input	Maintain annual oil capacity factor < 10% so that 40 CFR 60.44b NOx limit not applicable.	<p>Maintain records of black liquor and oil firing rate. Assume heat inputs of 6000 Btu per lb of black liquor (H_{BLS}) solids and 18,000 Btu/lb of residual fuel oil (H_o) fired.</p> <p>Cap Factor (%) = $(\text{lb oil fired/year})(H_o)(100) / [1.1(142,080 \text{ lb BLS/hr})(H_{BLS})(8760 \text{ hr/year})]$</p> <p>Report 12-month rolling average oil capacity factor monthly.</p> <p>Permittee shall maintain records, in a form suitable for inspection, of the following for at least five years after the date of taking such records:</p> <p>Amounts of each fuel combusted during each day and calculated annual capacity factor for residual oil, calculated on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.</p>	<p>40 CFR 60.44b(c) for capacity factor limit</p> <p>40 CFR 60.49b(d) for reporting requirements</p>

Parameter	Limit (shall not exceed)	Monitoring & Reporting	Applicable Requirements (basis of authority)
Opacity	Excess emissions greater than 35% opacity (six minute average) for six percent of the total possible contiguous periods of excess emission in quarter	<p>EPA Method 9 is the reference test method.</p> <p>Monitor continuously using a COMS that conforms to 40 CFR Part 60, Appendix F and Appendix B, Performance Specification 1. Span of the system shall be set at 70 percent opacity.</p> <p>The percent of the total number of possible contiguous periods of excess emissions in a quarter (excluding periods of startup, shutdown, or malfunction and periods when the facility is not operating) during which excess emissions occur exceeding six percent of average opacities is indicative of a violation of §60.11(d).</p> <p>Excess emissions are all 6-minute average opacities that exceed 35 percent.</p>	<p>40 CFR 60.282(a)(1)(ii) and NOC Order No. DE 99AQIS-94 for the opacity limit</p> <p>40 CFR 60.284(a)(1) for COMS operational parameters</p> <p>40 CFR 60.284(d)(1)(ii) for excess emissions definition</p> <p>40 CFR 60.284(e)(ii) for excess emissions allowance</p> <p>40 CFR 60.284(d) and 60.7(c) for reporting requirements</p> <p>40 CFR 60.13(e)(1) for data sampling requirement</p>
Opacity (when firing or co-firing oil)	Average 20% for more than 6 consecutive minutes in any 60 minute period except for one 6-minute period per hour of not more than 27 %.	<p>Method 9 is the reference test method. Monitor continuously using COM that conforms to 40 CFR Part 60. App. F and App B, Perf. Spec. 1. Maintain records of when oil is fired or co-fired. Report periods of excess emissions monthly.</p> <p>Opacity limit applies at all times, except during periods of startup, shutdown, or malfunction.</p>	Order No. 99AQIS-94

YOUR RIGHT TO APPEAL

You have a right to appeal this Order to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do both of the following within 30 days of the date of receipt of this Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

Your appeal alone will not stay the effectiveness of this Order. Stay requests must be submitted in accordance with RCW 43.21B.320.

ADDRESS AND LOCATION INFORMATION

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503 Pollution Control Hearings Board 1111 Israel Road SW STE 301 Tumwater, WA 98501	Department of Ecology Attn: Appeals Processing Desk P.O. Box 47608 Olympia, WA 98504-7608 Pollution Control Hearings Board P.O. Box 40903 Olympia, WA 98504-0903

MORE INFORMATION

- **Pollution Control Hearings Board**
www.eho.wa.gov/Boards_PCHB.aspx
- **Chapter 43.21B RCW, Environmental Hearings Office – Pollution Control Hearings Board**
<http://apps.leg.wa.gov/RCW/default.aspx?cite=43.21B>
- **Chapter 371-08 WAC – Practice and Procedure**
<http://apps.leg.wa.gov/WAC/default.aspx?cite=371-08>

- **Chapter 34.05 RCW – Administrative Procedure Act**
<http://apps.leg.wa.gov/RCW/default.aspx?cite=34.05>
- **Chapter 70.94 RCW, Washington Clean Air Act**
<http://apps.leg.wa.gov/RCW/default.aspx?cite=70.94>
- **Air Quality Rules**
<https://ecology.wa.gov/Air-Climate/Air-quality/Business-industry-requirements/Permits-for-burning-industrial>

SIGNATURES

Reviewed by:

Signature Authority:

Emily Toffol, P.E.
Environmental Engineer
Solid Waste Management Program

James DeMay, P.E.
Industrial Section Manager
Solid Waste Management Program

Date _____

Date _____